

AMENDMENTS TO THE CLAIMS

1-17. (Cancelled)

18. (Original) A UE apparatus for determining transmission power of a second TFCI (Transmit Format Combination Indicator) bit indicating transport format information of data on a downlink shared channel transmitted from a selected Node B to a UE (User Equipment) in a mobile communication system including the UE existing in a handover zone and a plurality of Node Bs in an active set indicating Node Bs capable of communicating with the UE, wherein the Node Bs transmit dedicated channel data including a first TFCI bit to the UE over dedicated channels, wherein the selected Node B among the Node Bs transmits dedicated channel data including the first TFCI bit and the second TFCI bit over a dedicated channel and transmits downlink shared channel data over the downlink shared channel, wherein a dedicated channel frame from the selected Node B has a plurality of time slots, each of the time slots including a transmission data field and a TFCI field indicating transport format information of the transmission data, each of the TFCI fields including a first field where the first TFCI bit indicating transport format information of the dedicated channel data transmitted over the dedicated channels is located and a second field where the second TFCI bit indicating transport format information of the downlink shared channel data transmitted over the dedicated shared channel is located, the apparatus comprising:

a plurality of common channel pilot estimators for estimating levels of common channel pilot signals received from the Node Bs in the active set; and

a downlink transmission power control command generator for determining a transmission power offset of the second TFCI bit using the measured levels of the common channel pilot signals, provided from the common channel pilot estimators.

19. (Original) The apparatus as claimed in claim 18, wherein the downlink transmission power control command generator transmits the power offset over an FBI field.

20. (Original) The apparatus as claimed in claim 19, wherein the power offset is transmitted over the FBI field using an SSDT signal.

21. (Original) The apparatus as claimed in claim 19, wherein the FBI field is comprised of an S field and a D field.

22. (Original) The apparatus as claimed in claim 18, further comprising a transmitter for transmitting the FBI field.

23. (Original) A method for determining transmission power of a second TFCI (Transmit Format Combination Indicator) bit indicating transport format information of data on a downlink shared channel transmitted from a selected Node B to a UE (User Equipment) in a mobile communication system including the UE existing in a handover region and a plurality of Node Bs in an active set indicating Node Bs capable of communicating with the UE, comprising the steps of:

the Node Bs transmitting dedicated channel data including a first TFCI bit to the UE over dedicated channels, wherein a first Node B among the Node Bs transmits dedicated channel data including the first TFCI bit and the second TFCI bit over a dedicated channel and transmitting downlink shared channel data over the downlink shared channel; and

the first Node B determining a transmission power level of the second TFCI bit to be higher than a ratio of transmission power of the dedicated channel data from a Node B transmitting only the dedicated channel data to transmission power of the first TFCI bit;

wherein a dedicated channel frame from the first Node B has a plurality of time slots, each of the time slots including a transmission data field and a TFCI field indicating transport format information of the transmission data, each of the TFCI fields including a first field where the first TFCI bit indicating transport format information of the dedicated channel data transmitted over the dedicated channels is located and a second field where the second TFCI bit indicating transport format information of the downlink shared channel data transmitted over the dedicated shared channel is located.

24. (Original) A method for determining transmission power of a second TFCI (Transmit Format Combination Indicator) bit indicating transport format information of data on a downlink shared channel transmitted from a selected Node B to a UE (User Equipment) in a mobile communication system including the UE existing in a handover zone and a plurality of Node Bs in

an active set indicating Node Bs capable of communicating with the UE, comprising the steps of:
the Node Bs transmitting dedicated channel data including a first TFCI bit to the UE over dedicated channels;

a first Node B among the Node Bs transmitting dedicated channel data including the first TFCI bit and the second TFCI bit over a dedicated channel and transmitting downlink shared channel data over the downlink shared channel; and

the UE determining a power offset of the second TFCI bit by comparing a sum of dedicated channel signals received from the Node Bs with reception power of the downlink shared channel and then transmitting the power offset to the first Node B;

wherein a dedicated channel frame from the first Node B has a plurality of time slots, each of the time slots including a transmission data field and a TFCI field indicating transport format information of the transmission data, each of the TFCI fields including a first field where the first TFCI bit indicating transport format information of the dedicated channel data transmitted over the dedicated channels is located and a second field where the second TFCI bit indicating transport format information of the downlink shared channel data transmitted over the dedicated shared channel is located.

25. (Original) A method for determining transmission power of a second TFCI (Transmit Format Combination Indicator) bit indicating transport format information of data on a downlink shared channel transmitted from a selected Node B to a UE (User Equipment) in a mobile communication system including the UE existing in a handover zone and a plurality of Node Bs in an active set indicating Node Bs capable of communicating with the UE, comprising the steps of:

the Node Bs transmitting dedicated channel data including a first TFCI bit to the UE over dedicated channels;

a first Node B among the Node Bs transmitting dedicated channel data including the first TFCI bit and the second TFCI bit over a dedicated channel and transmitting downlink shared channel data over the downlink shared channel; and

a controller of the first Node B determining a power offset larger in level than transmission power of the first TFCI bit according to a number of active sets of the UE and transmitting the determined power offset to the first Node B;

wherein a dedicated channel frame from the first Node B has a plurality of time slots, each of the time slots including a transmission data field and a TFCI field indicating transport format information of the transmission data, each of the TFCI fields including a first field where the first TFCI bit indicating transport format information of the dedicated channel data transmitted over the dedicated channels is located and a second field where the second TFCI bit indicating transport format information of the downlink shared channel data transmitted over the dedicated shared channel is located..

26. (Original) An apparatus for determining transmission power of a second TFCI (Transmit Format Combination Indicator) bit indicating transport format information of data on a downlink shared channel in a mobile communication system including a UE (User Equipment) existing in a handover region for a plurality of Node Bs, the apparatus comprising:

the Node Bs transmitting dedicated channel data including a first TFCI bit indicating transport format information of the dedicated channel data transmitted to the UE over dedicated channels, wherein at least a selected Node B among the Node Bs transmitting dedicated channel data including the first TFCI bit and the second TFCI bit over a dedicated channel and transmitting downlink shared channel data over the downlink shared channel; and

the selected Node B determining a transmission power level of the second TFCI bit of the selected Node B to be higher than a ratio of transmission power of the first TFCI bit from Node Bs transmitting only the dedicated channel data.

27. (Original) An apparatus for determining transmission power of a second TFCI (Transmit Format Combination Indicator) bit indicating transport format information of data on a downlink shared channel in a mobile communication system including a UE (User Equipment) existing in a handover region for a plurality of Node Bs , , the apparatus comprising:

the Node Bs transmitting dedicated channel data including a first TFCI bit to the UE over dedicated channels, wherein at least a selected Node B among the Node Bs transmitting dedicated channel data including the first TFCI bit and the second TFCI bit over a dedicated channel and transmitting downlink shared channel data over the downlink shared channel; and

the UE determining a power offset for the transmission power of the second TFCI bit of the selected Node B to be higher than a ratio of transmission power of the first TFCI bit from Node Bs transmitting only the dedicated channel data and transmitting the power offset to the selected Node B.

28. (New) A method for data transmission, comprising the steps of:

transmitting over a first channel at least a first TFCI (Transmit Format Combination Indicator) bit for indicating transport format information of a second channel by a plurality of cells; and

transmitting over a third channel at least a second TFCI bit for indicating transport format information of a fourth channel by a primary cell selected among the plurality of cells;

wherein a transmission power of the first TFCI bit is set using a first offset, and a transmission power of the second TFCI bit is set using a second offset.

29. (New) The method of claim 28, wherein the first channel is a DPCCH (Dedicated Physical Control Channel) transmitted by the plurality of cells.

30. (New) The method of claim 28, wherein the second channel is a DPDCH (Dedicated Physical Data Channel).

31. (New) The method of claim 28, wherein the third channel is a DPCCH (Dedicated Physical Control Channel) transmitted by the primary cell.

32. (New) The method of claim 28, wherein the fourth channel is a DSCH (Downlink Shared Channel) transmitted by the primary cell.

33. (New) The method of claim 28, wherein the second offset is larger than the first offset

34. (New) A method for data transmission, comprising the steps of:

transmitting over a DPDCH (Dedicated Physical Data Channel) and a DPCCH (Dedicated Physical Control Channel) at least a first TFCI (Transmit Format Combination Indicator) bit for indicating transport format information of the DPDCH by a plurality of cells; and

transmitting over the DPDCH, a DSCH (Downlink Shared Channel) and a DPCCH including a first TFCI bit for indicating transport format information of the DPDCH and a second TFCI bit for indicating transport format information of the DSCH by a primary cell selected among the plurality of cells;

wherein a transmission power of the first TFCI bit is set using a first offset, and a transmission power of the second TFCI bit is set using a second offset.

35. (New) The method of claim 34, wherein the second offset is larger than the first offset.

36. (New) A method for data transmission in a communication system, comprising the steps of:

transmitting over a first channel at least data for a UE (User Equipment) by at least one cell among a plurality of cells;

transmitting over a second channel at least the data for the UE by the at least one cell among the plurality of cells; and

transmitting over a third channel at least one of a first TFCI (Transmit Format Combination Indicator) bit for indicating transport format information of the first channel and a second TFCI bit for indicating transport format information of the second channel by the at least one cell among the plurality of cells;

wherein a transmission power of the first TFCI bit is set using a first offset, and a transmission power of the second TFCI bit is set using a second offset.

37. (New) The method of claim 36, wherein the first channel is a DPDCH (Dedicated Physical Data Channel).

38. (New) The method of claim 36, wherein the second channel is a DSCH (Downlink Shared Channel).

39. (New) The method of claim 36, wherein the third channel is a DPCCCH (Dedicated Physical Control Channel).

40. (New) The method of claim 36, wherein the at least one cell among the plurality of cells is a primary cell selected by the UE.

41. (New) The method of claim 36, wherein the second offset is larger than the first offset.

42. (New) A method for data transmission, comprising the steps of:
selecting a cell among a plurality of cells as a primary cell by a UE (User Equipment);
transmitting information of the primary cell to the plurality of cells;
receiving over a first channel at least data for the UE from the primary cell;
receiving over a second channel at least the data for the UE from the primary cell; and
receiving over a third channel including at least one of a first TFCI (Transmit Format Combination Indicator) bit for indicating transport format information of the first channel and a second TFCI bit for indicating transport format information of the second channel from the primary cell;

wherein a transmission power of the first TFCI bit is set using a first offset, and a transmission power of the second TFCI bit is set using a second offset.

43. (New) The method of claim 42, wherein the first channel is a DPDCH (Dedicated Physical Data Channel).

44. (New) The method of claim 42, wherein the second channel is a DSCH (Downlink Shared Channel).

45. (New) The method of claim 42, wherein the third channel is a DPCCH (Dedicated Physical Control Channel).

46. (New) The method of claim 42, wherein the primary cell is selected among the plurality of cells in an active set for the UE.

47. (New) The method of claim 42, wherein the second offset is larger than the first offset.

48. (New) A system for data transmission, comprising the steps of:

a plurality of cells for transmitting over a first channel at least a first TFCI (Transmit Format Combination Indicator) bit for indicating transport format information of a second channel;

a primary cell selected among the plurality of cells for transmitting a third channel including at least a second TFCI bit for indicating transport format information of a fourth channel; and

a UE (User Equipment) for receiving the first channel, the second channel, the third channel, and the fourth channel, and for selecting the primary cell among the plurality of cells; wherein a transmission power of the first TFCI bit is set using a first offset, and a transmission power of the second TFCI bit is set using a second offset.

49. (New) The system of claim 48, wherein the first channel is a DPCCH (Dedicated Physical Control Channel) transmitted by the plurality of cells.

50. (New) The system of claim 48, wherein the second channel is a DPDCH (Dedicated Physical Data Channel).

51. (New) The system of claim 48, wherein the third channel is a DPCCH (Dedicated Physical Control Channel) transmitted by the primary cell.

52. (New) The system of claim 48, wherein the fourth channel is a DSCH (Downlink Shared Channel) transmitted by the primary cell.

53. (New) The system of claim 48, wherein the second offset is larger than the first offset.

54. (New) A system for data transmission, comprising the steps of:

a plurality of cells for transmitting over a DPDCH (Dedicated Physical Data Channel) and a DPCCH (Dedicated Physical Control Channel);

a primary cell for transmitting over the DPDCH, a DSCH (Downlink Shared Channel), and a DPCCH a first TFCI bit for indicating transport format information of the DPDCH and a second TFCI bit for indicating transport format information of the DSCH; and

a UE (User Equipment) for receiving over the first channel, the second channel, the third channel, and the fourth channel, selecting the primary cell among the plurality of cells, and transmitting information of the primary cell to the plurality of cells;

wherein a transmission power of the first TFCI bit is set using a first offset, and a transmission power of the second TFCI bit is set using a second offset.

55. (New) The system of claim 54, wherein the second offset is larger than the first offset.